

The present invention provides human influenza viruses comprising an RNA-sequence encoding a modified RNA-polymerase, a process for the preparation thereof, pharmaceutical compositions comprising said human influenza viruses and their use for gene transfer into mammalian cells, for *ex vivo* gene transfer into antigen-presenting cells, such as dendritic cells, for *in vivo* somatic gene therapy, or *in vivo* vaccination purposes. The invention also relates to other non-avian influenza viruses, including equine, porcine (swine) influenza viruses.